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By: Molen

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PATENT

Attorney Docket No. 02558P-001340US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

James Blake et al.

Application No.: 09/733,239

Filed: December 8, 2000

For: CYSTEINE THIOL-PROTECTED

PEPTIDES FOR USE IN IMMUNOASSAYS

Examiner: Unassigned

Art Unit:

1648

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents Washington, D.C. 20231

Dear Sir:

AF

Applicants direct the Examiner's attention to the references below, also listed on the accompanying Form PTO-1449. Copies were provided in the parent application (USSN 08/462,749), grandparent application (USSN 08/140,696), great grandparent application (USSN 07/532,429), or great-great grandparent (USSN 07/360,513) and therefore are not enclosed herewith pursuant to 37 CFR 1.98(d), unless otherwise indicated.

The following U.S. Patents are set forth below by issue date.

11/89 Wang, et al.

AA 4,111,924 09/79 Fujino, et al.

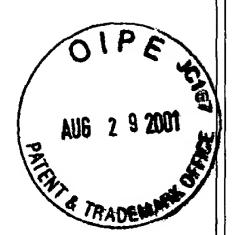
AB 4,499,080 02/85 Duflot

AC 4,629,783 12/86 Cosand

AD 4,689,398 08/87 Wu, et al.

AE 4,735,896 04/88 Wang, et al.

4,879,212



James Blake et al.

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The following international patent publications are set forth by approximate publication date:

| AG | 2,074,727 | 11/81 | UK |
|----|-----------|-------|--------|
| AH | 87/06005 | 10/87 | WO |
| AI | 247,557 | 12/87 | Europe |
| AJ | 89/03844 | 05/89 | WO |
| AK | 316,495 | 05/89 | Europe |
| AL | 326,490 | 08/89 | Europe |
| AM | 371,817 | 06/90 | Europe |

The following articles are set forth by the indicated year of publication date:

AN Hope et al., "Highly Potent Analogue of Oxytocin, Desamino-oxytocin," <u>J.</u> Biol. Chem., 237:1563-1566. (1961).

AO St. Gutmann, "Syunthese de glutathion et de l'oxytocine a l'aid d'un nouveau groupe protecteur de la fonction thiol," <u>Helv. Chim. Acta.</u>, 49:83 (1966).

AP Arnon et al., "Antibodies to a Unique Region in Lysozyme Provoked by a Synthetic Antigen Conjugate," <u>Proc. Natl. Acad. Sci. USA</u>, 62:163-170 (1969).

AQ Arnon et al., "Antibodies Reactive with Native Lysozyme Elicited by a Completely Synthetic Antigen," <u>Proc. Natl. Acad. Sci. USA</u>, 68:1450-1455 (1971).

AR Storey et al., "Studies on Polypeptides LI Application of S-Ethylcarbamoylcysteine to the Synthesis of a Protected Heptatetracontrapeptide Related to the Primary Sequence of Ribonuclease T1, <u>J. Am. Chem. Soc.</u> 94:6171-6178 (1972).

AS Veber et al., "Acetamidomethyl. A Novel Thiol Protecting Group for Cysteine," J. Am. Chem. Soc. 94:5456-5461 (1972).

AT Smith et al., "A Novel Method for Delineating Antigenic Determinants: Peptide Synthesis and Radioimmunoassay Using the Same Solid Support," <u>Immunochemistry</u>, 14:565-568 (1977).

AU Green, "Protective Groups in Organic Synthesis," pp. 212-213 Wiley & Sons., 1981.

AV Young et al., "Protection During Peptide Synthesis: Some New Directions," Chem. Abstracts 95:169719 (1981). James Blake et al.

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Page 3

AW Klipstein et al., "Properties of Synthetically Produced Escherichia coli Heat-Stable Enterotoxin," <u>Infect. Immun.</u>, 39:117-121 (1983).

AX Blomberg et al., "Viral Antibody Screening System that Uses a Standardized Single Dilution Immunoglobulin G Enzyme Immunoassay with Multiple Antigens," <u>J. Clin.</u> Microbiol., 17:1081-1091 (1983).

AY Tainer et al., "The Atomic Mobility Component of Protein Antigenicity," Ann. Rev. Immunol. 3:501-535 (1985).

AZ Bernatowicz et al., Proc. 9th Am. Peptide Symposium (1987).

BA Brady et al., Proc. 10th Am. Peptide Symposium (1988).

BB Kisco et al. "Synthesis of a New Porcine Brain Natriuretic Peptide Using the S-Trimethylacetamidomethyl-Cysteine," <u>Tetrahedron Letters</u>, 30:1979-1982 (1989).

BC Albericio et al., "Use of the Npys Thiol Protection in Solid Phase Peptide Synthesis," Chem. Abstract 112:341411 (1989).

It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

Applicants believe that their invention as claimed is patentable over the above references taken alone or in any combination. However, Applicants reserve the right to demonstrate that their claimed invention was made prior to any one or more of the above-identified references. No inference should be drawn as to the pertinence of the references based on the order in which they are presented.

Applicants respectfully request that the Examiner review the foregoing references to make his own determination of the patentability of the present invention and that the references be made of record in the file of this application.

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CERTIFICATION

Applicants believe that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is hereby authorized to charge any fees necessitated by this transmittal to Townsend and Townsend Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

Reg. No. 32,928

TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, 8th Floor San Francisco, CA 94111

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| FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR | | | Attorney Docket No.: 02558P-001340US Application No.: 09/733,239 | | | | | |
| APPLICANT'S INFORMATION SIGNATURE | | | Applicant: James Blake, et al. Filing Date: December 8, 2000 Group: 1648 | | | | | |
| | Use several sheets | | | | | | | |
| Reference Desig | T | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | J.S. PATENT DOCUMENT | Ţ · · · · · · · · · · · · · · · · · · · | T on t | Page 1 | | |
| Examiner Initial | Document No. | Date | Name | Class | Sub-class | Filing Date (If Appropriate) | | |
| AA | 4,111,924 | 09/79 | Fujino, et al. | D | | ECH CENT | | |
| AB | 4,499,080 | 02/85 | Duflot O | | | C A | | |
| AC | 4,629,783 | 12/86 | Cosand | 2 9 2001 2 | | | | |
| AD | 4,689,398 | 08/87 | Wu, et al. | | | ₩ ⊢ | | |
| AE | 4,735,896 | 04/88 | Wang, et al. | TRADEMARKE | | 20 | | |
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| | Document No. | Date | Country | Class | Sub-class | Translation (Yes/No) | | |
| AG | 2,074,727 | 11/81 | UK | | | | | |
| AH | 87/06005 | 10/87 | wo | | | | | |
| AI | 247,557 | 12/87 | Europe | | | | | |
| AJ | 89/03844 | 05/89 | wo | | | | | |
| AK | 316,495 | 05/89 | Europe | | | ··· | | |
| AL | 326,490 | 08/89 | Europe | | | | | |
| AM | 371,817 | 06/90 | Europe | | | | | |
| | O | THER ART (Inclu | uding Author, Title, Date, P | ertinent Pages, E | tc.) | | | |
| AN | Hope et al., "Hig | ghly Potent Analog | gue of Oxytocin, Desamino-o | xytocin, "J. Biol. | Chem., 237:1563- | 1566. (1961). | | |
| AO | St. Gutmann, "Syunthese de glutathion et de l'oxytocine a l'aid d'un nouveau groupe protecteur de la fonction thiol," Helv. Chim. Acta., 49:83 (1966). | | | | | | | |
| AP | Arnon et al., "Antibodies to a Unique Region in Lysozyme Provoked by a Synthetic Antigen Conjugate," Proc. Natl. Acad. Sci. USA, 62:163-170 (1969). | | | | | | | |
| AQ | Arnon et al., "Antibodies Reactive with Native Lysozyme Elicited by a Completely Synthetic Antigen," Proc. Natl. Acad. Sci. USA, 68:1450-1455 (1971). | | | | | | | |
| AR | Storey et al., "Studies on Polypeptides LI Application of S-Ethylcarbamoylcysteine to the Synthesis of a Protected Heptatetracontapeptide Related to the Primary Sequence of Ribonuclease T1, <u>J. Am. Chem. Soc</u> . 94:6171-6178 (1972). | | | | | | | |
| AS | Veber et al., "Acetamidomethyl. A Novel Thiol Protecting Group for Cysteine," J. Am. Chem. Soc. 94:5456-5461 (1972). | | | | | | | |
| AT | Smith et al., "A Novel Method for Delineating Antigenic Determinants: Peptide Synthesis and Radioimmunoassay Using the Same Solid Support," <u>Immonochemistry</u> , 14:565-568 (1977). | | | | | | | |
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| AV | Young et al., "Protection During Peptide Synthesis: Some New Directions," Chem. Abstracts 95:169719 (1981). | | | | | | | |
| AW | Klipstein et al., "Properties of Synthetically Produced Escherichia coli Heat-Stable Enterotoxin," Infect. Immun., 39:117-121 (1983). | | | | | | | |
| AX | Blomberg et al., "Viral Antibody Screening System that Uses a Standardized Single Dilution Immunoglobulin G Enzyme Immunoassay with Multiple Antigens," <u>J. Clin. Microbiol.</u> , 17:1081-1091 (1983). | | | | | | | |
| AY | Tainer et al., "The Atomic Mobility Component of Protein Antigenicity," Ann. Rev. Immunol. 3:501-535 (1985). | | | | | | | |
| AZ | Bernatowicz et al., Proc. 9 th Am. Peptide Symposium (1987). | | | | | | | |
| BA | Brady et al., Pro | c. 10 th Am. Peptid | e Symposium (1988). | | | | | |

AUG 2 9 2001 FORM PTO-1449 (Modified)

LIST OF PATENTS AND PUBLICATION OF OR Application No.: 09/733,239 Attorney Docket No.: 02558P-001340US Applicant: James Blake, et al. APPLICANT'S INFORMATION DISCLOSURE Filing Date: December 8, 2000 Group: 1648 STATEMENT (Use several sheets if necessary) Kisco et al. "Synthesis of a New Porcine Brain Natriuretic Peptide Using the S-Trimethylacetamidomethyl-BB Cysteine," Tetrahedron Letters, 30:1979-1982 (1989). Albericio et al., "Use of the Npys Thiol Protection in Solid Phase Peptide Synthesis," Chem. Abstract 112:341411 BC(1989). **DATE CONSIDERED EXAMINER**

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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